

CDIAC Seminar: The Fundamentals of Debt Financing

**The Role of the Underwriter:  
Structuring, Pricing and Underwriting  
Municipal Securities**

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STONE &  
YOUNGBERG

# Overview: The Role of the Underwriter

Intermediary between issuers and capital markets

## Financing Plan

- Advise issuer on financing options
- Analyze alternatives
- Perform credit assessment and due diligence

## Structuring

- Recommend optimal bond structure
- Review legal documentation and Official Statement
- Prepare credit presentations
- Analyze insurance bids

## Pre-Marketing

- Identify and inform potential investors
- Set interest rates and prices
- Buy securities from issuer to resell to investors

## Post-Closing

- Monitor credit
- Maintain secondary market liquidity in bonds
- Assist issuer with questions and follow up

# Financing Plan Preparation

## ■ Understand Issuer's Objectives

- What kind of projects are planned? When are funds needed?
- What revenues are available?
- How much flexibility does the issuer need?

## ■ Investigate Legal and Policy Constraints

- What other debt or obligations are outstanding?
- What kind of debt can be issued?
- What are the policy considerations?

## ■ Evaluate Credit

- What is the likely credit rating for bonds?
- What are the prospects for bond insurance?

## ■ Analyze Financing Options

- How much debt can revenue support? Can any existing debt be refinanced?
- What structures are acceptable in current market conditions?
- What option provides the best balance of cost and flexibility?

# Debt Structuring Considerations

- **Security Pledge**

- Type of revenue pledge, one revenue stream or multiple
- Flow of funds and priority of claim relative to other obligations
- Collateral assets pledged, if relevant

- **Debt Service Structure**

- Payment dates and amortization term
- Level, escalating or structured annual debt payments
- Capitalized interest

- **Reserve Funds**

- Cash funded or surety reserve

- **Additional Bonds Test**

- Provides conditions for future bond issues with parity claim on revenues

- **Call Features**

- Determines whether and when bonds can be retired prior to maturity and any early redemption penalty

# Bond Ratings and Credit Enhancement

## ■ Rating Agencies

- Analyze credit quality of bonds and assign rating
- S&P, Moody's, Fitch

## ■ Non-Rated Bonds

- No rating sought
- Used for less than investment grade credits

## ■ Bond Insurance

- Guarantees repayment of bonds to investors
- Issuer pays up-front insurance premium
- Bonds are sold based on insurance company's rating rather than issuer's underlying rating
- Issuer benefits from lower interest rates

### Long Term Rating Categories

<u>Moody's</u>	<u>S&amp;P/Fitch</u>	<u>Risk</u>	<u>Grade</u>
Aaa	AAA	Highest quality	Investment
Aa	AA	High quality	
A	A	Strong	
Baa	BBB	Medium Grade	
<hr/>			
Ba, B	BB, B	Speculative	Junk
Caa, Ca	CCC/CC/C	Highly Speculative	
C	D	Default	

### Current Bond Insurers Active in California

#### AAA Rated

Ambac  
Assured Guaranty  
CIFG  
FGIC  
FSA  
MBIA  
XL

#### Others

ACA  
Radian

# Overview of U.S. Debt Markets

## ■ Issuers

- U.S. Treasury, Federal agencies
- Fannie Mae, Freddie Mac
- Private companies, non-profits
- State and local governments

## ■ Total Debt Outstanding

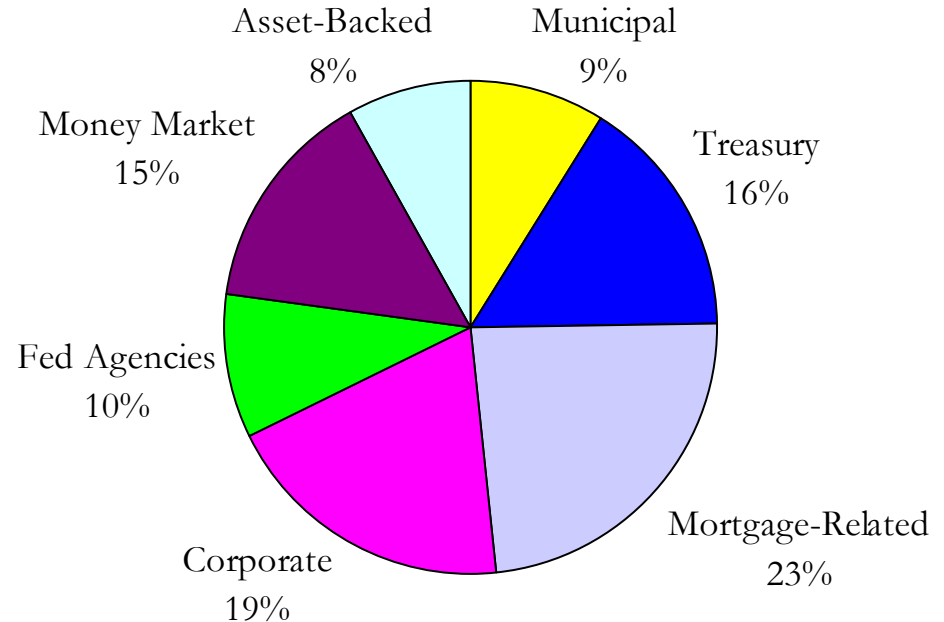
- \$28 trillion as of 2007 Q1
- 16% in Treasury bonds
- 9% in municipal bonds

## ■ Average Daily Trading Volume

- \$969 trillion total
- 57% in Treasury bonds
- 31% in mortgage related debt
- 8% in Federal agency debt
- 3% in municipal bonds

## Public and Private Debt in U.S. Markets

\$28 Trillion outstanding as of 2007 Q1



Source: Securities Industry and Financial Markets Association

# Municipal Market Overview

## ■ Municipal Bonds

- Primary feature is tax-exemption
- Taxable municipals also issued

## ■ Municipal Market Size

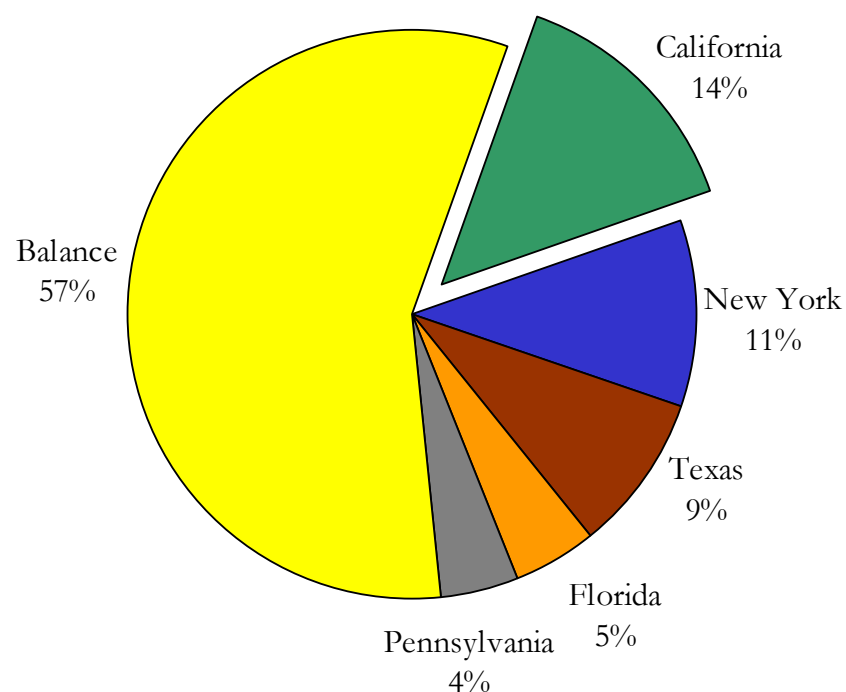
- \$2.5 trillion outstanding as of 2007 Q1
- \$387 billion issued in 2006
- \$24.4 billion average daily trading volume

## ■ California Municipal Market

- \$57 billion issued in 2005
- 14% of municipal market issuance

## Municipal Market Issuance by State 2005

Total: \$406 Billion

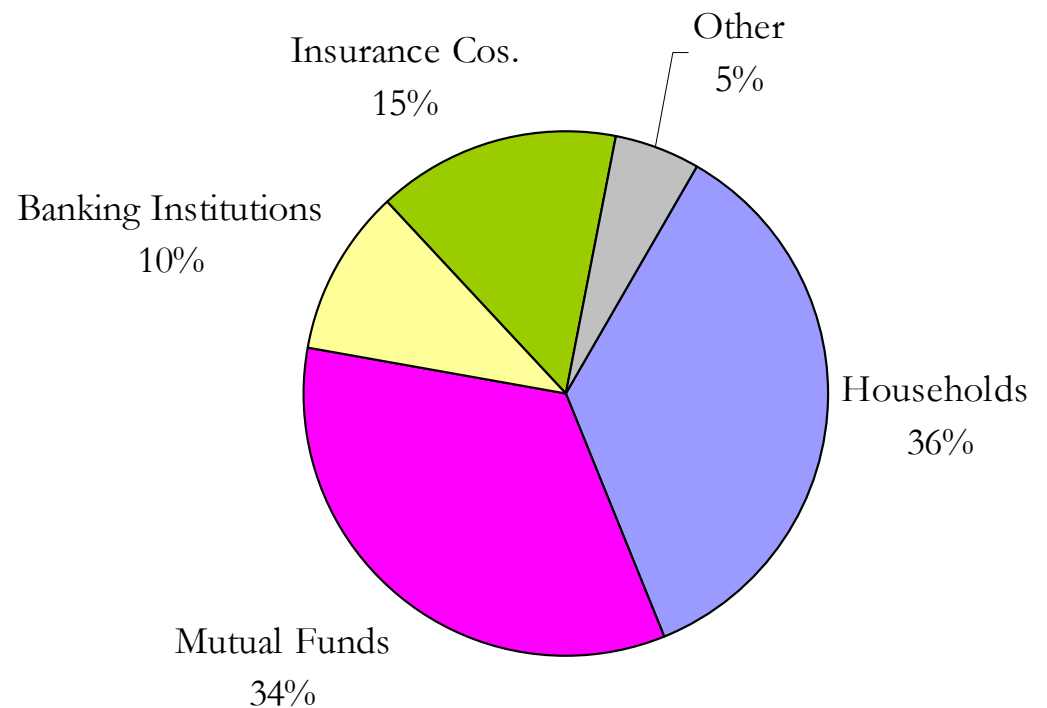


Source: Thomson Financial

# Who Buys Municipal Bonds?

- **Retail investors**
  - High net-worth individuals
  - Often older, high tax bracket
- **Institutional Investors**
  - Bond funds
  - Investment advisors
  - Commercial banks
  - Bank trust departments
  - Insurance companies
  - Hedge funds
- **Primary benefits**
  - Diversification
  - Stability
  - Tax-free income

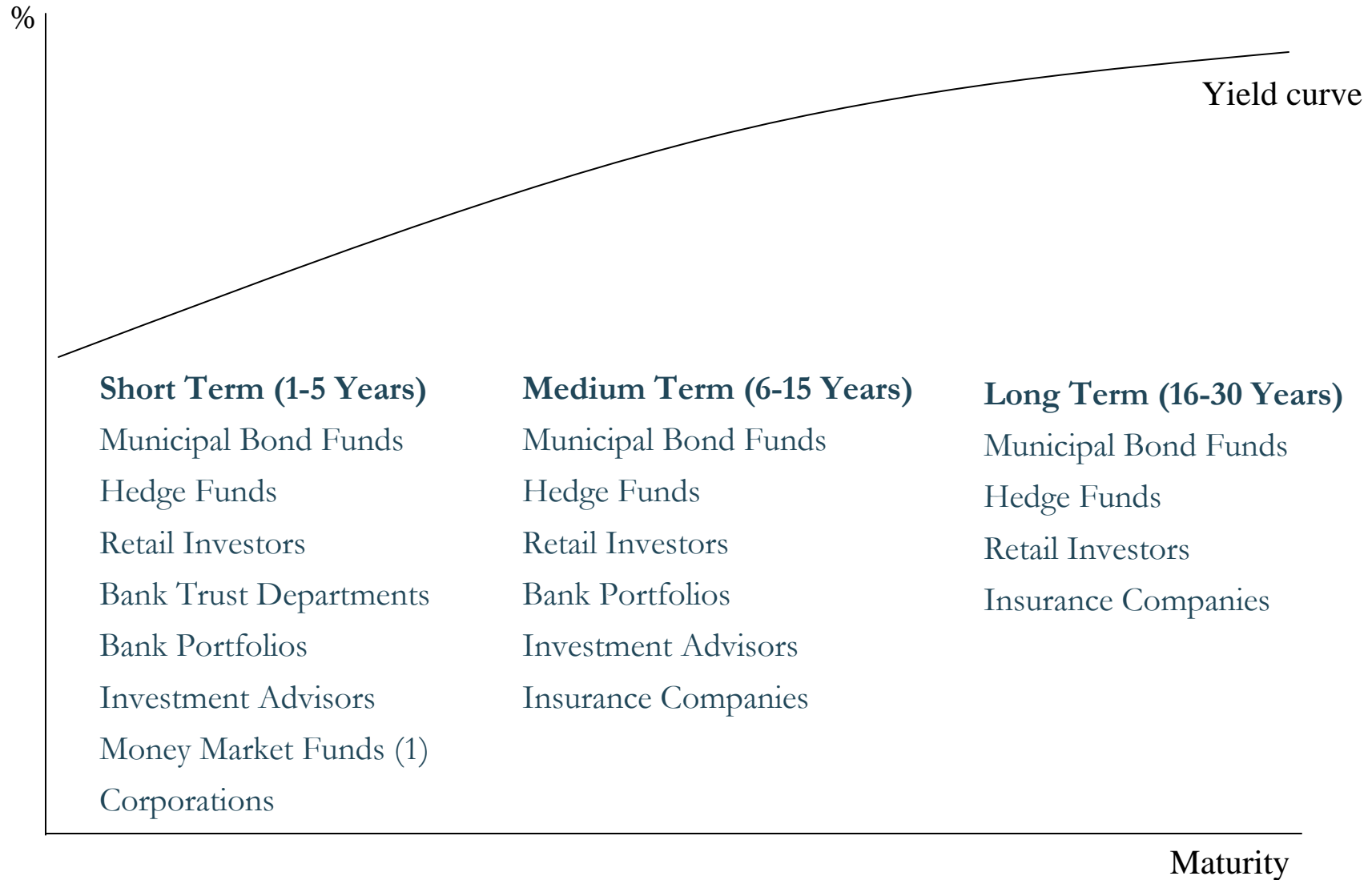
## Holder of Municipal Bonds 2007 Q1, \$2.5 trillion outstanding



Source: Securities Industry and Financial Markets Association



# Bond Buyers Vary by Maturity



(1) Buyers of bonds maturing in thirteen months or less

# How Bonds Are Sold

- **Negotiated Sale**

- Underwriter is selected up front, involved in total financing process
- Recommends optimal bond structures, market timing
- Pre-markets bonds to investors

- **Competitive Sale**

- Bonds are auctioned to underwriter providing the lowest bid at a set time and place

- **Sole-managed or Syndicate**

- May use one underwriter or multiple firms working as a team

- **Private Placement**

- Directly place debt with one or a few investors
- May be used for higher risk financings, not appropriate for public sale
- May be used for small financings to limit issuance costs

# Marketing of a Bond Sale

- **Timely Pre-Marketing Efforts**
  - Prime market with early communications
  - Thorough preliminary official statement
  - Site tours for prospective investors
- **Appropriate Investor Suitability**
  - Identify investors suitable for amount of risk
- **Outreach to Retail Investors**
  - High net-worth individuals
  - Target those most familiar with credits
- **Engage Institutional Buyers**
  - Size and type of financing will determine nature and extent of institutional interest



# Interest Rate Basics

## ■ Interest rates

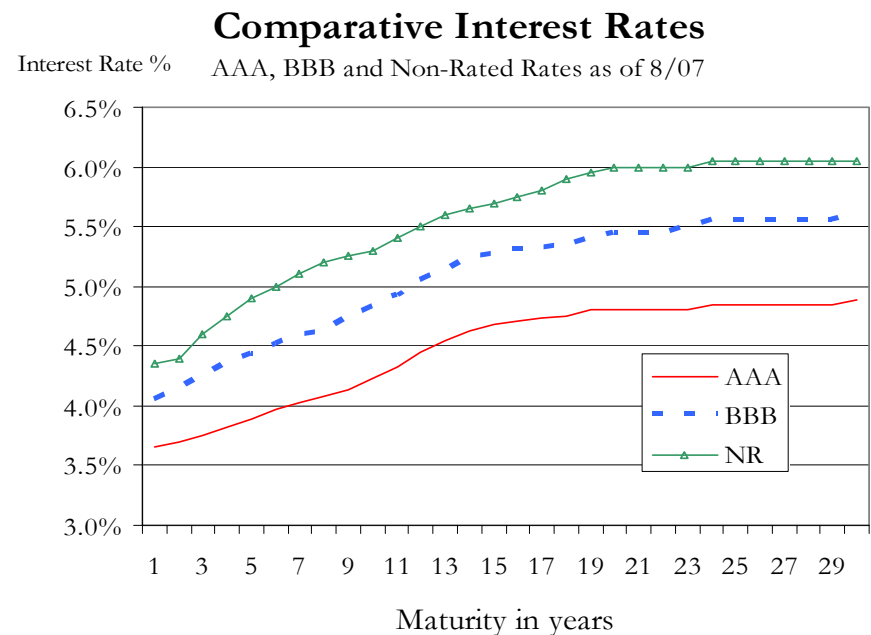
- Fixed rate bonds set at time of bond sale
- Variable rate bonds re-set periodically

## ■ Interest rates vary for many reasons

- Type of security pledged
- Level of risk, credit rating
- Time period for pay back
- Market supply & demand
- Comparative prices
- Taxable versus tax-exempt
- External factors like “Flight to Quality”

## ■ Yield Curve

- Compilation of interest rates paid for different maturities
- Varying investor interests
- Short term vs. long term rate



# Bond Pricing Basics

## ■ Maturity

- Date at which principal is repaid

## ■ Coupon

- Rate at which interest is paid, usually semi-annually
- Fixed rate: set at time of pricing
- Variable rate: changes over time, may be reset daily, weekly, monthly...

## ■ Yield

- Market return
- Varies over time

## ■ Call Features

- Allow bonds to be retired before scheduled maturity
- Specify period of call protection and prepayment penalty

## ■ Bond Price

- Function of coupon, yield and maturity
- Price moves inversely to yield
  - Price  $\uparrow$  Yield  $\downarrow$
  - Price  $\downarrow$  Yield  $\uparrow$

## ■ Par Bond

Coupon = Yield, Price = 100%

## ■ Discount Bond

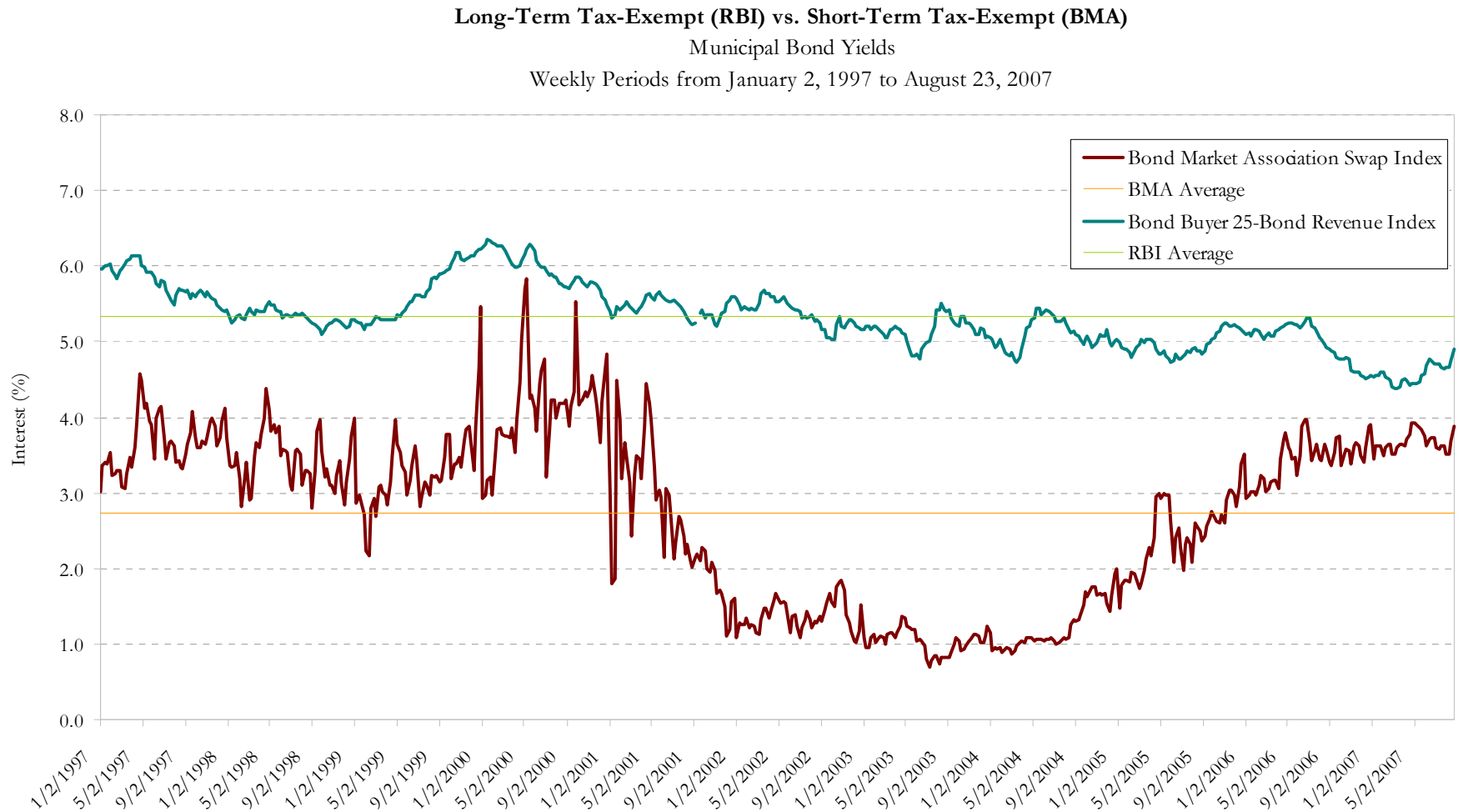
Coupon < Yield, Price < 100%

## ■ Premium Bond

Coupon > Yield, Price > 100%

# Historic Interest Rate Trends

## Historic Relationship Between Long-Term and Short-Term Tax-Exempt Rates



# Pre-Pricing and Pricing

## ■ Pre-pricing

- Typically the afternoon before the pricing
- Underwriter evaluates market conditions and market tone
- Compares proposed financing to other comparable bond sales in market
- Proposes interest rates and maturity structure to appeal to the most investors

## ■ Pricing

- Order period typically runs from early to mid-morning
- Coordinates with sales force to solicit orders from prospective investors
- Determines whether prices match supply with demand at end of order period
- May adjust interest rates and prices up or down
- Underwriter and issuer execute a Purchase Contract
- Purchase contract locks in interest rates, prices and principal amounts, transfers market risk on unsold inventory to Underwriter

# Pricing Order Monitor Screen

View Issue Data			
\$23,245,000			
Amador Water Agency			
Amador Water System Revenue Certificates of Participation, 2006 Series A			
State of CA			
Stone & Youngberg LLC			
Full Issue Description	Amador Water System Revenue Certificates of Participation, 2006 Series A		
Dated Date	3/21/2006	Interest Accrual Date	03/21/2006
Fed Tax Exempt	Yes	BQ	No
Tax Exempt (State of Issue)	Yes	AMT	No
Pay Formula	30/360	Bond Counsel	Orrick, Herrington & Sutcliffe LLP
Pay Frequency	Semi-Annually	Letter of Credit Provider	
First Coupon	6/1/2006	Letter of Credit Exp. Date	
Delivery Date	3/21/2006 (Est.)	Insurance	MBIA
Clearance	Book Entry	Underlying Rating	/A-
Call Features for Call Schedule 'A'	6/1/2016 @ 100	Rating	/AAA
Comments	Subject to Mandatory Prepayment		

Issuer clients are able to monitor order flow during order period

Order Summary							
MATURITY	PAR	CPN	YLD	ORDER COUNT	TOTAL ORDERS	OVER-SUBSCRIBED by	BALANCE (\$000's)
6/1/2009	275	4.000	3.350	1	150	0 x	125
6/1/2010	470	4.000	3.450	3	510	1.09 x	-40
6/1/2011	485	4.000	3.520	1	25	0 x	460
6/1/2012	505	4.000	3.620	1	25	0 x	480
6/1/2013	525	4.000	3.700	1	490	0 x	35
6/1/2014	550	4.000	3.770	1	130	0 x	420
6/1/2015	570	4.000	3.850	1	50	0 x	520
6/1/2016	590	4.000	3.950	1	125	0 x	465
6/1/2017	615	4.000	4.020	0	0	0 x	615
6/1/2018	640	4.000	4.080	0	0	0 x	640
6/1/2019	665	4.000	4.150	0	0	0 x	665
6/1/2020	695	4.000	4.200	0	0	0 x	695
6/1/2021	720	4.125	4.270	0	0	0 x	720
6/1/2022	750	4.200	4.320	0	0	0 x	750
6/1/2023	780	4.125	4.370	0	0	0 x	780
6/1/2027	3,505	5.000	4.480	1	2,500	0 x	1,005
6/1/2032	5,465	5.000	4.580	2	10,930	2.00 x	-5,465
6/1/2036	5,440	5.000	4.620	4	21,760	4.00 x	-16,320
Totals	23,245			17	36,695		8,375



# Sample Sources & Uses

## Sources

- Par Amount
- Plus Original Issue Premium
- Minus Original Issue Discount
- Funds on hand (for a refunding)

## Uses

- Project fund
- Refunding escrow (for a refunding)
- Debt service reserve fund
- Capitalized interest (optional)
- Bond insurance premium (if applicable)
- Costs of issuance
  - Financing team fees, underwriting discount, printing cost, rating agency fees, and other reimbursable costs

## Sources

Par Amount	\$ 25,000,000.00
Net Original Issue Discount	(254,614.60)
	<u>\$ 24,745,385.40</u>

## Uses

Project Fund	22,222,885.40
Debt Service Reserve Fund	1,782,500.00
Bond Insurance	240,000.00
Cost of Issuance & UW Discount	500,000.00
	<u>\$ 24,745,385.40</u>

# Closing and Post-Closing

- **Pre-Closing**

- Typically two weeks after the pricing
- Final Official Statement is delivered to investors
- Legal documentation is finalized and executed

- **Closing**

- Underwriter delivers proceeds in exchange for bonds

- **Post-Closing**

- Underwriter maintains secondary market liquidity in bonds
- Monitors credit and addresses investor questions
- Assists issuer with follow up questions